

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-20. (canceled)

21. (New) A pattern

formation device comprising:

a mold for forming a predetermined pattern on a processing object;

a heating unit heating said mold;

an object holding unit holding said processing object;

a press mechanism pressing said mold against said processing object held by said object holding unit; and

a cooling unit cooling said mold.

22. (New) The pattern formation device according to claim 21, wherein said mold heated by said heating unit is pressed against said processing object by said press mechanism to heat said processing object to a temperature close to, equal to or higher than the glass transition temperature thereof, and a predetermined pattern is formed on said processing object with said mold.

23. (New) The pattern formation device according to claim 21, wherein said object holding unit comprises a temperature maintaining unit keeping said processing object held by the object holding unit at a temperature equal to or lower than the glass transition temperature thereof.

24. (New) The pattern formation device according to claim 21, wherein said heating unit comprises a controller controlling the temperature of said mold, and

said controller performs control so that said mold is held at a temperature lower than the glass transition temperature of said processing object in a state in which said mold and said processing object are separated from each other, and said mold is held at a temperature close to, equal to or higher than the glass transition temperature of said processing object in a state in which said mold is pressed against said processing object.

25. (New) The pattern formation device according to claim 21, further comprising a processing object heating unit heating said processing object held by said object holding unit.

26. (New) The pattern formation device according to claim 21, wherein said press mechanism switches the amount of press of said mold against said processing object in a plurality of levels,

heat of said mold heated by said heating unit is transmitted to said processing object when the amount of press of said mold against processing object is a first amount of press, and

a pattern is formed on said processing object with said mold when the amount of press of said mold against said processing object is a second amount of press different from said first amount of press.

27. (New) The pattern formation device according to claim 21, wherein said mold forms a pattern on only the surface area of said processing object.

28. (New) The pattern formation device according to claim 21, wherein said mold has a heat capacity smaller than that of said processing object.

29. (New) The pattern formation device according to claim 21, further comprising a movement mechanism moving said mold and/or said processing object

so that said mold faces a plurality of regions of said processing object held by said object holding unit.

30. (New) The pattern formation device according to claim 21, wherein in said heating unit, the temperature of said mold is varied within a range which is based on a temperature at which said processing object is softened, according to timing in which said mold is pressed against said processing object by said press mechanism.

31. (New) The pattern formation device according to claim 21, wherein said press mechanism further comprises a load controller controlling a load applied from said mold to said processing object, and

said load controller applies a first load and a second load different from said first load one after another from said mold to said processing object.

32. (New) The pattern formation device according to claim 21, wherein said heating unit uses a ceramic heater.

33. (New) The pattern formation device according to claim 21, wherein said pattern formation device further comprises a mold holding unit holding said mold and connected to said press mechanism, and

said mold holding unit is in surface contact with said mold and holding said mold by an electrostatic force.

34. (New) A pattern formation method for forming a predetermined pattern on a processing object with a mold, comprising:

a heating step of heating said mold to a predetermined temperature based on the glass transition temperature of said processing object;

a pattern forming step of pressing said mold against said processing object to form said pattern;

a cooling step of cooling said mold to a predetermined temperature equal to or lower than the glass transition temperature of said processing object after pressing said mold against said processing object; and

a mold removing step of separating said cooled mold from said processing object.

35. (New) The pattern formation method according to claim 34, wherein a step comprising said heating step, said pattern forming step, said cooling step and said mold removing step is repeatedly carried out for each of a plurality of regions of said processing object.

36. (New) The pattern formation method according to claim 34, further comprising a heat transmitting step of transmitting heat of said mold to said processing object prior to said pattern forming step.

37. (New) The pattern formation method according to claim 34, wherein said mold has a heat capacity smaller than that of said processing object.

38. (New) A pattern formation system comprising:

a pattern formation device forming a predetermined pattern on a processing object; and

a feeding device feeding said processing object to said pattern formation device and taking out the same,

said pattern formation device comprising:

a mold for forming a predetermined pattern on said processing object;

a heating unit heating said mold;

an object holding unit holding said processing object;

a press mechanism pressing said mold against said processing object held by said object holding unit; and
a cooling unit cooling said mold.

39. (New) The pattern formation system according to claim 38, wherein said pattern formation system further comprises a magazine holding unit holding a magazine containing a plurality of said processing objects, and

said feeding device takes out said processing objects one by one from said magazine held by said magazine holding unit, and feeds the same to said pattern formation device.

40. (New) The pattern formation system according to claim 39, wherein said magazine holding unit can hold a plurality of said magazines.

41.(New) A pattern formation device comprising:

a mold for forming a predetermined pattern on a processing object;
a heating unit heating said mold;
an object holding unit holding said processing object; and
a press mechanism pressing said mold against said processing object held by said object holding unit,

wherein said press mechanism switches the amount of press of said mold against said processing object in a plurality of levels,

heat of said mold heated by said heating unit is transmitted to said processing object when the amount of press of said mold against said processing object is a first amount of press, and

a pattern is formed on said processing object with said mold when the amount of press of said mold against said processing object is a second amount of press different from said first amount of press.